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PATENT

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: ZSCHUNKE ET AL 2 PCT

Serial No.: 10/522,861 Group: 2631

FILED: JANUARY 3, 2005

FOR: METHOD FOR DIVIDING THE BIT RATE OF QPSK SIGNALS
INTO TWO OR SEVERAL SUBCHANNELS

INFORMATION DISCLOSURE STATEMENT

Mail Stop: AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA. 22313-1450

Dear Sir:

Applicants are enclosing Form PTO-1449 disclosing references cited in the present application and/or by the German Patent Office, and/or the German Priority Patent and/or International Search Report (copy enclosed).

REFERENCES CITED IN US SPECIFICATION

U.S. Patent No. 4,680,777 is discussed in the present Specification on page 3 in the first full paragraph.

The following references are enclosed:

"Nachrichtentechnik" [Communications Technology] by E. Herter/W. Lörcher, 5th edition, which appeared in the Hanser Verlag [publishing company] in 1990, pages 110 ff. discussed in the Specification on page 1 in the 2nd paragraph;

IEEE Transactions on Communications COM-15, No. 6 (December 1967) pages 805-811, discussed on page 23, in the first full paragraph;

D. Saha and G. Birdsall: IEEE Transactions on Communications 37, No. 5 (May 1989), pages 437 to 448 discussed on page 2 in line 8 of the Specification and in the German Priority document;

"Datenübertragung" [Data Transmission], Volume I, Fundamentals, 2nd edition 1983, Berlin, Springer Verlag [publishing company], ISBN 3-540-12117-X, pgs. 110 to 124 and pages 144-150 discussed in the Preliminary Amendment;

Manual by J. Huber: "Trelliscodierung" [Trellis Coding], Springer Verlag, 1992 under the series Nachrichtentechnik [Communications Technology], 21, ISBN 3-540-55792-X, pages 12, 13

discussed in the Preliminary Amendment.

The following references will be forwarded when they are available:

IEEE Transactions on Communications COM-29, No. 7 (July 1981), pages 982-989 discussed on page 23, in the first full paragraph;

IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, page 1465 discussed in the Preliminary Amendment.

CITED IN GERMAN PRIORITY DOCUMENT AND/OR BY THE GERMAN PATENT AND TRADEMARK OFFICE

The following documents were cited in the German priority document and/or by the German Patent and Trademark Office:

SARI, Hikmet: A generalization of multidimensional modulation IN: IEEE Communications, 1995. ICC 95 Seattle, Gateway to Globalization, 1995 IEEE International Conference on, Volume:

2, 18-22 June 1995 Page(s): 683 - 687 vol 2.;

VIGIL, A. J. u .a.: Finite Truncated Cosine Series Design of Full Response Signaling Offset Quadrature Binary Modulation Systems, IN: IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, 5. 1465- 1470;

VISINTIN, Monica u. a.: Four-Dimensional Signaling for Bandlimited Channels, / IN IEEE Transactions an Communications, Vol. 42, No. 2/3/4, February/March/April 1994, 5. 403 - 409;

The following references will be forwarded when they are available:

BOCKER, Peter: Datenertragung, Band I, Grundlagen, 2. Aufl. 1983, Berlin u. a., Springer-Verlag, ISBN 3-540-12117-X, S. 110- 124 u. 144- 150.

REFERENCES CITED IN THE INTERNATIONAL SEARCH REPORT:

The following two (2) references cited in the International

Search Report, are also enclosed:

Gruenbacher D M et al: "N Dimensional Orthogonal QPSK Signaling with Discrete Prolate Spheroidal Sequences" Radio and Wireless Conference, 1998, Colorado Springs, Co, USA 9-12 August 1998, Pages 63-68, Xp 010296329 New York, USA, and Waldeck B H et Al:

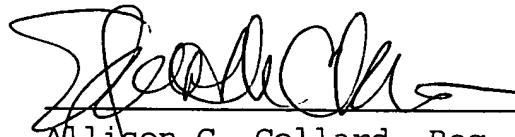
"Performance Evaluation of TFO-Q2PSK in Gaussian, Multipath and Fading Channels" 1999 Ieee Africon 5th, Africon Conference in Africa, Cape Town, South Africa, 28 September 1999- October 1999, Pages 233-238 XP 000895832 New York, USA.

Since this Information Disclosure Statement is being filed prior to a first Office Action, it is believed that no fee is due. However, if it is determined that a fee is due, the Commissioner is hereby authorized to charge, or to credit any over payment, to our Deposit Account Number 03-2468.

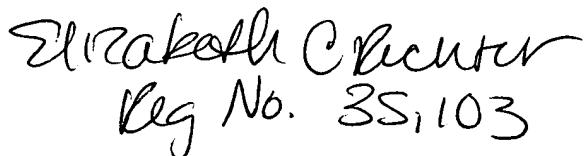
It is respectfully requested that this Information

Disclosure Statement be considered and placed into the application file.

Respectfully submitted,
WILMUT ZSHUNKE ET AL 2 PCT



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Enclosures: PTO-form 1449
International Search Report
International Preliminary Examination Report
10 References

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: COMMISSIONER OF PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450 on November 14, 2005.


Maria Guastella

| FORM PTO-1449 (Modified) (REV. 7-80) | | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | | ATTY. DOCKET NO.: ZSHUNKE ET AL 2 PCT | SERIAL NO.: 10/522,861 | | |
|--|---|--|--------|---|----------------------------------|----------|----------------------------|
| LIST OF REFERENCES CITED BY APPLICANT <small>(Use several sheets if necessary)</small> | | | | APPLICANT: Wilmut ZSHUNKE ET AL | | | |
| | | | | FILING DATE: JAN. 31, 2005 | GROUP: 2631 | | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
| | AA | 4680777 | 7/1987 | SAHA (German Priority) | | | |
| | AB | 6278732 | 8/2002 | BEIDAS BASSEL F ET AL (Intl. Srch. Rep.) | | | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION |
| | | | | | | | YES NO |
| | AC | | | | | | |
| | AD | | | | | | |
| OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.) | | | | | | | |
| AE | <p>"Datenübertragung" [Data Transmission], BOCKER, Peter, Volume I, Fundamentals, 2nd edition 1983, Berlin, Springer Verlag [publishing company], ISBN 3-540-12117-X, pgs. 110 to 124 and pages 144-150 ((German Priority, Preliminary Amendment) ENCLOSED)</p> | | | | | | |
| AF | <p>Gruenbacher D M et al: "A Simple Algorithm for Generating Discrete Prolate Spheroidal Sequences: IEEE Transactions on Signal Processing Vol. 42, No. 11, November 1994 Page 3276-3278, XP 002269014 New York, USA (Intl. Srch. Rep.) TO FOLLOW</p> | | | | | | |
| AG | <p>Gruenbacher D M et al: "N Dimensional Orthogonal QPSK Signaling with Discrete Prolate Spheroidal Sequences" Radio and Wireless Conference, 1998, Colorado Springs, Co, USA 9-12 August 1998, Pages 63-68, XP 010296329 New York, USA (Intl. Srch. Rep.) ENCLOSED</p> | | | | | | |
| AH | <p>Huber, J. Manual .. "Trelliscodierung" [Trellis Coding], Springer Verlag, 1992 under the series Nachrichtentechnik [Communications Technology], 21, ISBN 3-540-55792-X, pgs 12, 13 (Preliminary Amendment & German Priority) ENCLOSED</p> | | | | | | |
| AI | <p>SAHA, Debarata, BIRDSALL, Theodore G.: Quadrature-Quadrature Phase-Shift Keying, IN: IEEE Transactions and Communications, Vol. 37, No. 5, May 1989, S.437 - 448. (Specification & German Priority) ENCLOSED</p> | | | | | | |
| AJ | <p>IEEE Transactions on Communications COM-29, No. 7 (July 1981), pages 982-989 (Specification)(NOT PRESENTLY AVAILABLE.)</p> | | | | | | |
| EXAMINER | | | | DATE CONSIDERED | | | |

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| | | FILING DATE: JAN. 31, 2005 | GROUP: 2631 |

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

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| AA | SARI , Hikmet: A generalization of multidimensional modulation IN: IEEE Communications, 1995. ICC 95 Seattle, Gateway to Globalization, 1995 IEEE International Conference on, Volume: 2, 18-22 June 1995 Page(s): 683 - 687 vol 2. (German Priority) ENCLOSED |
| AB | VIGIL , A. J. u .a.: Finite Truncated Cosine Series Design of Full Response Signaling Offset Binary Modulation Systems, IN: IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, 5. 1465- 1470. (German Priority) ENCLOSED |
| AC | Waldeck B H et Al: "Performance Evaluation of TFO-Q ² PSK in Gaussian, Multipath and Fading Channels" 1999 Ieee Africon 5 th , Africon Conference in Africa, Cape Town, South Africa, 28 September 1999- October 1999, Pages 233-238 XP 000895832 New York, USA (Intl. Srch. Rep.) ENCLOSED |
| AD | "Nachrichtentechnik" [Communications Technology] by E. Herter/W. Lörcher , 5th edition, which appeared in the Hanser Verlag [publishing company] in 1990, pages 110 ff. (Specification) ENCLOSED |
| AE | IEEE Transactions on Communications COM-15, No. 6 (Dec. 1967) pgs 805-811 SALTZBERG , Burton, R. (Specification) ENCLOSED |
| AF | IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, pages 1465 (Preliminary Amendment) TO FOLLOW |
| AG | IEEE Transactions on Communications, Vol. 42, No. 2/3/4, February/March/April 1994, S. 403 - 409. VISINTIN , Monica u. a.: Four-Dimensional Signaling for Bandlimited Channels, / IN (German Priority) ENCL. |
| AH | INTERNATIONAL SEARCH REPORT - ENCLOSED |
| AI | INTERNATIONAL PRELIMINARY EXAMINATION REPORT - ENCLOSED |
| AJ | |
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